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Let
$$\begin{aligned}\log n &= \log\left[\log \mathrm{B} - \log b - 0{\cdot}00004\,.\,(\mathrm{M}-m)\right] \\ &\quad + 1{\cdot}8261420 + \log(836 + \mathrm{A} + a) \\ &= \log\left[\log \mathrm{B} - \log b - 0{\cdot}00007\,.\,(\mathrm{M}'-m')\right] \\ &\quad + 2{\cdot}0814145 + \log(500 + \mathrm{A}' + a') \\ &= \log\left[\log \mathrm{B} - \log b - 0{\cdot}00009\,.\,(\mathrm{M}''-m'')\right] \\ &\quad + 2{\cdot}1783245 + \log(400 + \mathrm{A}'' + a''),\end{aligned}$$

then
$$h - \mathrm{H} = n + {\cdot}001\,.\,nl + h'' - \mathrm{H}'',$$

where
$$\begin{aligned}1{\cdot}8261420 + \log 900 &= 2{\cdot}0814145 + \log 500 \\ &= 2{\cdot}1783245 + \log 400 = 4{\cdot}7803845 = \log 60309{\cdot}19.\end{aligned}$$

This form requires less previous preparation, avoids the logarithms of numbers near to unity as $\left(1 + \frac{\mathrm{A} + a - 64}{900}\right)$, and allows of the use of foreign data to obtain the result in English feet, so that it only becomes necessary to reduce the height of the lower station to English measures.

V. "Bessel's Hypsometric Tables, as corrected by Plantamour, reduced to English Measures and recalculated." By Alexander J. Ellis, Esq. Communicated by Dr. Neil Arnott. Received February 23, 1863.

These Tables, with the preliminary explanations respecting their correction and reduction, have been, by direction of the Council, communicated to Admiral FitzRoy for insertion in the "Meteorological Papers published by Authority of the Board of Trade," and will appear in the twelfth Number of the series.

April 16, 1863.

Dr. WILLIAM ALLEN MILLER, Treasurer and Vice-President, in the Chair.

Pursuant to notice given at the last Meeting, the Right Honourable Sir Edmund Walker Head, Baronet, was proposed for election and immediate ballot.

The ballot having been taken, Sir Edmund W. Head was declared duly elected a Fellow of the Society.